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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/772,436
Filing Date: February 06, 2004
Appellant(s): SHIBATA ET AL.

Weiwei Y. Stiltner
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 5/31/11 appealing from the Office action mailed 3/1/11.

(1) Real Party in Interest

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:

Claims pending: 1-23

Claims rejected: 1-23

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

(8) Evidence Relied Upon

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-23 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over U.S. Patent Application Publication No. 2004/0070782 to Mihira.

Claims 1, 7, 13, and 18 set forth three different hierarchical architectures for the hardware resource, a first control program, a second control program, and an application program. However, Mihira discloses only one hierarchical architecture but Mihira does state that variations and modifications can be made without departing from the scope of the invention (paragraph 212) and it is common in the art to rearrange processing parts without changing the overall function of the system. This is the case

with the instant invention in that Mihira discloses a hierarchical architecture that serves the same purpose and functions the same as the hierarchical architectures of claims 1, 7, and 13.

Regarding claim 1, Mihira discloses an image processing apparatus comprising: a hardware resource that includes at least one of an image forming unit, a read unit, and a display unit (see Fig. 1 and paragraph 58), a control layer (see Fig. 1 and paragraph 63-64, control service layer **9**), an external API (application program interface) program (see Fig. 1 and paragraph 66-67, NCS **31**), and an application group including one or more application programs stored in an application layer (see Fig. 1 and paragraph 60, applications **21-24**), wherein the hardware resource, the control layer, the external API program and the application group are arranged in such a hierarchical architecture that the control layer is superordinate to the hardware resource, and the application group including the one or more application programs and the external API are superordinate to the control layer (see Fig. 1), the control layer includes a first API for receiving, with use of a predefined function, a first request relating to image processing from the external API program and a second request relating to image processing from the one or more application programs, and controls, on receiving either of the first and second requests, the hardware resource to perform image processing based on the received request (see paragraphs 59-63, 65, 71, and 89-91, a host computer can request document printing through communication with document management service **123** which is SF **28** and the control service layer **9** interprets processing requests sent from the application layer **5**, of which WEB page

application **25**, SOAP communication application **26**, WSF **27**, and SFs **28** are a part of, thus, the second control program (any of WEB page application **25**, SOAP communication application **26**, WSF **27**, and SFs **28**) passes received processing requests to the first control program (any of control service layer **9**) as control service layer **9** is responsible for management and performance of the hardware resources), and the external API program includes a second API for receiving, a third request relating to image processing from an external source, converts the received third request to a command supported by the first API, and passes the command as the first request to the control layer, bypassing the one or more application programs of the application group stored in the application layer (see paragraphs 66-67 and 89-99, NIC **69** is an interface device connecting the composite machine **1** with a communication network such as the Internet and as such a network apparatus **100** can perform communication with composite machine **1** via the Internet to communicate with document management service **123** and printing service **130**, both of which may be provided in the control service layer **9**. Therefore, after a request is received by external API (NCS **31**) via NIC **69** the network apparatus **100** communicates directly with control service layer **9** which provides document management service **123** and printing service **130** thereby bypassing the one or more application programs, NCS **31** receives a document request via XML and SOAP and that httpd **121** converts the information from the received request utilizing the SOAP and XML data to create a ticket acquisition request that is then transmitted to document management service **123** or printing service **130**, which is provided in control service layer **9**), wherein commands,

parameters, and syntax for controlling the hardware resource are released to the public for incorporation by external users into software supported by the second API (see paragraphs 61, 85, and 89-93, network apparatus **100** performs communication using XML with the SOAP **26** which then sends the request to the WSF **27** via API **51** and the WSF **27** sends the request to SF **28** via API **52** and the SF **28** then sends the necessary information and appropriate instructions for processing to the corresponding control service layer **31-38** via API **53** for execution, such as printing of a selected document, Mihira states that the API's execute through functions previously defined and that communication between network apparatus **100** and composite machine **1** can take place via the Internet).

Regarding claim 7, Mihira discloses an image processing apparatus comprising: a hardware resource that includes at least one of an image forming unit, a read unit, and a display unit (see Fig. 1 and paragraph 58), a control layer (see Fig. 1 and paragraph 63-64, control service layer **9**), an external API (application program interface) program (see Fig. 1 and paragraph 66-67, NCS **31**), and an application group including one or more application programs stored in an application layer (see Fig. 1 and paragraph 60, applications **21-24**), wherein the hardware resource, the control layer, the external API program and the application group are arranged in such a hierarchical architecture that the control layer is superordinate to the hardware resource, and the application group including the one or more application programs and the external API are superordinate to the control layer (see Fig. 1), the control layer includes a first API for receiving, with use of a predefined function, a first request

relating to image processing from the external API program, and controls the hardware resource to perform image processing based on the received first request (see paragraphs 59-63, 65, and 71), and the external API program includes a second API for receiving, a second request relating to image processing from an external source and a third request relating to image processing from the one or more application programs, converts, on receiving either of the second and third requests, the received request to a command supported by the first API, and passes the command as the first request to the control layer, bypassing the one or more application programs of the application group stored in the application layer (see paragraphs 66-67 and 89-99, NIC **69** is an interface device connecting the composite machine **1** with a communication network such as the Internet and as such a network apparatus **100** can perform communication with composite machine **1** via the Internet to communicate with document management service **123** and printing service **130**, both of which may be provided in the control service layer **9**. Therefore, after a request is received by external API (NCS **31**) via NIC **69** the network apparatus **100** communicates directly with control service layer **9** which provides document management service **123** and printing service **130** thereby bypassing the one or more application programs, NCS **31** receives a document request via XML and SOAP and that httpd **121** converts the information from the received request utilizing the SOAP and XML data to create a ticket acquisition request that is then transmitted to document management service **123** or printing service **130**, which is provided in control service layer **9**), wherein commands, parameters, and syntax for controlling the hardware resource are released to the public for incorporation by

external users into software supported by the second API (see paragraphs 61, 85, and 89-93, network apparatus **100** performs communication using XML with the SOAP **26** which then sends the request to the WSF **27** via API **51** and the WSF **27** sends the request to SF **28** via API **52** and the SF **28** then sends the necessary information and appropriate instructions for processing to the corresponding control service layer **31-38** via API **53** for execution, such as printing of a selected document, Mihira states that the API's execute through functions previously defined and that communication between network apparatus **100** and composite machine **1** can take place via the Internet).

Regarding claim 13, Mihira discloses an image processing apparatus comprising: a hardware resource that includes at least one of an image forming unit, a read unit, and a display unit (see Fig. 1 and paragraph 58), a control layer (see Fig. 1 and paragraph 63-64, control service layer **9**), an external API (application program interface) program (see Fig. 1 and paragraph 66-67, NCS **31**), and an application group including one or more application programs stored in an application layer (see Fig. 1 and paragraph 60, applications **21-24**), wherein the control layer is arranged between the hardware resource and the application group including the one or more application programs and the external API program is arranged superordinate to the one or more application programs in the application group in a hierarchical architecture (see Fig. 1), the control layer includes a first API for receiving, with use of a predefined function, a first request relating to image processing from the external API program and a second request relating to image processing from the one or more application programs, and controls, on receiving either of the first and second requests, the hardware resource to

perform image processing based on the received request (see paragraphs 59-63, 65, and 71), the external API program includes a second API for receiving a third request relating to image processing from an external source, converts the received third request to a command supported by the first API, and passes the command to an appropriate one of the control layer, and the one or more application programs, depending on the requested processing, the command passed to the control layer serving as the first request (see paragraphs 58-63, 65-67, 71, 85, and 89-91, the API is publicly released because a network apparatus, such as a host computer receives a list of stored documents and can transmit XML data using a SOAP protocol to perform printing of a stored document, therefore the API **51** is publicly released prior to the host computer requesting document printing and thereby allows document printing requests via document management service **123**, a host computer can request document printing through communication with document management service **123** which is SF **28** and the control service layer **9** interprets processing requests sent from the application layer **5**, of which WEB page application **25**, SOAP communication application **26**, WSF **27**, and SFs **28** are a part of, thus, the second control program (any of WEB page application **25**, SOAP communication application **26**, WSF **27**, and SFs **28**) passes received processing requests to the first control program (any of control service layer **9**) as control service layer **9** is responsible for management and performance of the hardware resources, NCS **31** receives a document request via XML and SOAP and that httpd **121** converts the information from the received request utilizing the SOAP and XML data to create a ticket acquisition request that is then transmitted to document

management service **123** or printing service **130**, which is provided in control service layer **9**), wherein commands, parameters, and syntax for controlling the hardware resource are released to the public for incorporation by external users into software supported by the second API (see paragraphs 61, 85, and 89-93, network apparatus **100** performs communication using XML with the SOAP **26** which then sends the request to the WSF **27** via API **51** and the WSF **27** sends the request to SF **28** via API **52** and the SF **28** then sends the necessary information and appropriate instructions for processing to the corresponding control service layer **31-38** via API **53** for execution, such as printing of a selected document, Mihira states that the API's execute through functions previously defined and that communication between network apparatus **100** and composite machine **1** can take place via the Internet).

Regarding claim 18, Mihira discloses an image processing apparatus comprising: a hardware resource that includes at least one of an image forming unit, a read unit, and a display unit (see Fig. 1 and paragraph 58), a control layer (see Fig. 1 and paragraph 63-64, control service layer **9**), an external API (application program interface) program (see Fig. 1 and paragraph 66-67, NCS **31**), and an application group including one or more application programs stored in an application layer (see Fig. 1 and paragraph 60, applications **21-24**), wherein the hardware resource and the programs are arranged in such a hierarchical architecture that the control layer is superordinate to the hardware resource, and the one or more application programs and the external API program are superordinate to the control layer (see Fig. 1), the control layer includes a first API for receiving a first request relating to image processing from

the external API program and a second request relating to image processing from the one or more application programs, and controls, on receiving either of the first and second requests, the hardware resource to perform image processing based on the received request (see paragraphs 59-63, 65, and 71), and the external API program includes a second API for receiving, a third request relating to image processing from an external source, converts the received third request to a command supported by the first API, and passes the command as the first request to the control layer, bypassing one or more application programs of the application group stored in the application layer (see paragraphs 66-67 and 89-99, NIC **69** is an interface device connecting the composite machine **1** with a communication network such as the Internet and as such a network apparatus **100** can perform communication with composite machine **1** via the Internet to communicate with document management service **123** and printing service **130**, both of which may be provided in the control service layer **9**. Therefore, after a request is received by external API (NCS **31**) via NIC **69** the network apparatus **100** communicates directly with control service layer **9** which provides document management service **123** and printing service **130** thereby bypassing the one or more application programs, NCS **31** receives a document request via XML and SOAP and that httpd **121** converts the information from the received request utilizing the SOAP and XML data to create a ticket acquisition request that is then transmitted to document management service **123** or printing service **130**, which is provided in control service layer **9**), wherein commands, parameters, and syntax for controlling the hardware resource are released to the public for incorporation by external users into software

supported by the second API (see paragraphs 61, 85, and 89-93, network apparatus **100** performs communication using XML with the SOAP **26** which then sends the request to the WSF **27** via API **51** and the WSF **27** sends the request to SF **28** via API **52** and the SF **28** then sends the necessary information and appropriate instructions for processing to the corresponding control service layer **31-38** via API **53** for execution, such as printing of a selected document, Mihira states that the API's execute through functions previously defined and that communication between network apparatus **100** and composite machine **1** can take place via the Internet), wherein the software is used to control the hardware resource to perform processing that is not executable by the hardware resource under control of any of the one or more application programs (see paragraphs 66-67 and 89-99, NIC **69** is an interface device connecting the composite machine **1** with a communication network such as the Internet and as such a network apparatus **100** can perform communication with composite machine **1** via the Internet to communicate with document management service **123** and printing service **130**, both of which may be provided in the control service layer **9**. Therefore, after a request is received by external API (NCS **31**) via NIC **69** the network apparatus **100** communicates directly with control service layer **9** which provides document management service **123** and printing service **130** thereby bypassing the one or more application programs).

Regarding claim 2, Mihira further discloses wherein the control layer passes the received first request to the one or more application programs if the first request is directed to the one or more application programs (see paragraphs 58-60 and 63).

Regarding claims 3 and 14, Mihira further discloses wherein the third request is data expressed in an XML (see paragraph 90).

Regarding claims 4, 10, and 15, Mihira further discloses wherein the external API program further includes: a first converting unit for extracting predetermined information from the received XML data (see paragraphs 66-67 and 90) and a second converting unit for converting the extracted information to the command supported by the first API (see paragraphs 97-99 and 102-103).

Regarding claims 5, 11, and 16, Mihira further discloses wherein upon receiving a request relating to execution of a print job, the control layer controls the image forming unit to perform the print job (see paragraphs 97-99 and 102-103).

Regarding claims 6, 12, and 17, Mihira further discloses wherein upon receiving a request relating to execution of a scan job, the control layer controls the read unit to perform the scan job (see paragraphs 58-60, 63, 65, 69, 71, and 80).

Regarding claim 8, Mihira further discloses wherein the external API program passes the received second request to the one or more application programs if the second request is directed to the one or more application programs (see paragraphs 58-60 and 63).

Regarding claim 9, Mihira further discloses wherein the second request is data expressed in an XML (see paragraph 90).

Regarding claim 19, Mihira further discloses wherein the second API is an external API for controlling operations of the hardware resource according to requests received from an external device (see paragraphs 62 and 89-90).

Regarding claims 20-23, Mihira further discloses wherein the second API includes a function callable by the external source, wherein the function calls a plurality of functions that are predefined by the control layer (see paragraphs 66-67 and 89-99, NIC **69** is an interface device connecting the composite machine **1** with a communication network such as the Internet and as such a network apparatus **100** can perform communication with composite machine **1** via the Internet to communicate with document management service **123** and printing service **130**, both of which may be provided in the control service layer **9**. Therefore, after a request is received by external API (NCS **31**) via NIC **69** the network apparatus **100** communicates directly with control service layer **9** which provides document management service **123** and printing service **130** thereby bypassing the one or more application programs).

(10) Response to Argument

Applicant's arguments have been fully considered but they are not persuasive. Regarding claims 1, 7, 13, and 18, the applicants asserts that Mihira (US 2004/0070782) does not disclose that the external applications can request processing using an API program that converts the request to a command supported by a control layer API, and passes the command as the first request to the control layer. The Examiner respectfully disagrees as Mihira does disclose such features. Particularly, figure 3 of Mihira shows a network apparatus **100**, such as a host computer, connected with composite machine **1** via communication network **110**, which may be the Internet,

to request a document to be printed from composite machine **1**. The network apparatus **100** performs data communication with either a document management service **123** or a printer service **130** through the use of XML data and SOAP (para 89-90). The request to print a document is received by API program NCS **31** and a second API httpd **121** converts the request into a ticket acquisition request, based on the initially received XML and SOAP request from the network apparatus **100**, and send the ticket request to printing service **130**, which is located in the control layer **9** (para 92). The ticket request is then processed by ECS **35** that controls the hardware resources to execute printing of the specified document (para 93 and 99). Thus, the external API program (NCS **31**) includes a second API (httpd **121**) for receiving a third request relating to image processing from an external source (print request from network apparatus **100**), converts the received third request to a command supported by the first API (httpd **121** converts the received request from network apparatus **100** into a ticket acquisition request that is then transmitted to printing service **130** provided in control service layer **9**, control service layer **9** is normally reached via API **53**, which is the first API), and passes the command as the first request to the control layer, bypassing the one or more application programs of the application group stored in the application layer (since printing service is provided in control service layer **9** the application layer **5** is bypassed as application **21-24** are not used).

Regarding claims 4, 10, and 15, the applicant asserts that Mihira fails to disclose a combination including a first converting unit for extracting predetermined information from the received XML data and a second converting unit for converting the extracted

information to the command supported by the first API. The Examiner respectfully disagrees as Mihira does disclose such features. Particularly, Mihira states that NCS **31** receives a document request via XML and SOAP and that httpd **121** converts the information from the received request utilizing the SOAP and XML data to create a ticket acquisition request that is then transmitted to document management service **123** or printing service **130**, which is provided in control service layer **9**. Therefore, NCS **31** acts as a first converting unit and httpd **121** acts as a second converting unit.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Mark R. Milia/

Examiner, Art Unit 2625

Conferees:

David K. Moore

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